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ABSTRACT

The use of the MMPI and MMPI-2 to assist in the understanding of individuals with bulimia nervosa is examined. DSM-IV criteria for diagnosis of bulimia nervosa are reviewed. It is also important to understand the personality variables or psychological correlates associated with this disorder. The structure and history of the MMPI and MMPI-2 are briefly reviewed; findings from studies using MMPI and MMPI-2 are discussed; and the information these tests provide about individuals with bulimia nervosa is presented. Personality variables and psychological correlates associated with bulimia nervosa are examined and their relation to particular MMPI-2 scales is considered. Implications for potential prevention and intervention strategies are discussed. Although the use of the MMPI-2 does not provide clear cut answers or completely consistent profiles of individuals with bulimia, the test may help in putting together general personality characteristics common to individuals with bulimia and in understanding basic commonalties among individuals with bulimia. The specific variables underlying a particular person's struggle with bulimia may become more apparent when test data is considered in conjunction with data from the clinical interview. Further research with MMPI-2 may help to identify persons at-risk for bulimia nervosa. (EMK)

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Use of the MMPI and MMPI-2 With Persons with Bulimia

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Abstract

This article examines the use of the MMPI and MMPI-2 to assist in the understanding of individuals with bulimia nervosa. Findings from a number of studies regarding the MMPI and MMPI-2 are discussed, and the information these tests provide about those with bulimia nervosa is presented. Personality variables and psychological correlates associated with bulimia nervosa are examined and their relation to particular MMPI-2 scales is considered. Implications for potential prevention/intervention strategies are discussed.

Use of the MMPI and MMPI-2 with Persons with Bulimia

Bulimia nervosa is an eating disorder which occurs primarily in females and affects between 1% and 3% of the population (American Psychiatric Association, 1994). The essential diagnostic features of bulimia nervosa, according to the Diagnostic and Statistical Manual of Mental Disorders IV(DSM-IV) (American Psychiatric Association, 1994) are, "binge eating and inappropriate compensatory methods to prevent weight gain," (p. 545). In addition the DSM-IV (1994) adds that, "the self-evaluation of individuals with bulimia nervosa is excessively influenced by body shape and weight" (p. 545). Guidelines also exist which specify time limits within which each of the mentioned behaviors must occur in order for a diagnosis to be made: "the binge eating and inappropriate compensatory behaviors must occur, on average, at least twice a week for three months" (American Psychiatric Association, 1994, p. 545).

The aforementioned criteria are essential for the diagnosis of bulimia nervosa, but it is also important to understand the personality variables or psychological correlates associated with this disorder. Through an understanding of these personality characteristics, clinicians may develop and implement more effective and comprehensive treatments.

The Minnesota Multiphasic Personality Inventory-2 (MMPI-2) is the most widely used objective personality test (Graham, 1993). The original version of the MMPI was published in 1943, and a revised version, the MMPI-2, was published in 1989 (Groth-Marnat, 1997). Overall, the revision allowed for a more complete and well-representative standardization sample. The revision also included more items that were up-to-date and stated in unbiased language, thus making the test more suitable for use with present day populations (Graham, 1993). Due to the similarity of the MMPI and MMPI-2, results of research on both instruments can be used and are assumed comparable.

The MMPI-2 consists of over 560 true/false questions (Graham, 1993). Three validity scales are included in the MMPI-2 to detect the presence or absence of accurate and valid results (Graham, 1993). The MMPI-2 also includes ten clinical scales, each of which examine different dimensions of the test taker's personality (Groth-Marnat, 1997). Careful evaluation of the scores on each of the clinical scales allows the examiner to construct a personality profile of the examinee. This profile enables the clinician to both make more accurate and beneficial inferences about the examinee's behavior and also to determine a possible direction for treatment. It is important to note, however, that results of the MMPI-2 are not intended to be the only key in unlocking the mysteries within the client. Rather, the MMPI-2 should be used in conjunction with a clinical interview and other sorts of testing. When used in this manner, the MMPI-2 does hold the potential for providing key insights into the test taker's personality.

The MMPI-2, due to its thorough and precise nature, is a useful tool for the identification of personality characteristics among this population. That is to say, beyond the presence of excessive eating, purging or other inappropriate compensatory action taken afterwards, clinicians may utilize MMPI-2 results to help understand the characteristics individuals with bulimia may share on the inside that may trigger this behavior. Indeed, certain personality and behavioral characteristics have been found to be associated with those suffering from bulimia nervosa.

Review of Research Pertaining to the MMPI and MMPI-2 and Bulimia Nervosa

Research has found that individuals with bulimia most often describe themselves as having somatization, obsession-compulsion, interpersonal sensitivity, depression, anxiety, anger, paranoid ideation and psychotism (Weiss & Ebert, 1983). When compared with normal weight controls, individuals with bulimia reported feeling a greater external locus of control, a greater fear of fat, and more anxiety in situations related to eating (Weiss & Ebert, 1983). These anxieties and psychopathological behaviors are personality characteristics that often manifest themselves in one or more of the various clinical scales

of the MMPI-2. For example, obsessive compulsive complaints have been associated with elevations on scale 7 (Williamson, Kelley, Davis, Ruggiero, & Blouin, 1985). Similarly, depression has been linked with elevations on scale 2 (Pryor & Wiederman, 1995) and psychotism associated with an elevated scale 4 (Dykens & Gerrard, 1985). Thus, the MMPI-2 could be a potentially useful tool to aid in both the detection of bulimia nervosa and also the piecing together of a common personality profile of an individual with bulimia.

It is likely then, that disturbed thought and behavior patterns, such as those exhibited by individuals with bulimia will be detected by certain MMPI-2 scales. Furthermore, due to the multiple characteristics shared by individuals with bulimia and detected by the MMPI-2's clinical scales, it is possible to conclude that the MMPI-2 has the potential to be a useful diagnostic and descriptive assessment tool for this population.

As such, the MMPI-2 might be used to predict future problems with bulimia nervosa in certain clients and possibly enable clinicians to intervene early and help those who are thought to be at risk for bulimia nervosa. Clinicians may learn the relationship of certain MMPI-2 scales which are often elevated together and/or detect two or three point code types common for individuals with bulimia on the MMPI-2. This may lead to a better understanding of the disorder and most importantly, implications for treatment possibilities may be discovered.

Based on the understanding of the MMPI-2's utility with this population, a great amount of research has been completed using the MMPI and MMPI-2 as methods for uncovering and linking together certain personality characteristics common among those with bulimia nervosa. The results, although not entirely consistent across all studies, do allow for a more comprehensive knowledge base to be formed regarding those with bulimia nervosa.

Scale 2 elevations

Research has linked depression with bulimia; Herzog (1982) noted that 75% of the bulimic women studied reported significant depressive feelings. Shisslak, Schnaps and Crago (1989) compared the MMPI patterns of women with eating disorders to women with substance abuse problems. Similarities between the two groups were, first of all said to be, "loss of control over the substance, use of the substance to cope with negative feelings, a tendency to be secretive about the addictive behavior in spite of negative physical, social, or legal consequence" (p. 209). One may deduce that the substance mentioned in the previous quote could be both the alcohol or the drug used by the substance abuser or the food used by the person with bulimia. Analysis comparing the eating disordered participants with the substance abusing participants showed similarity on scale 4 elevations (the rebellious and anti-social component of both groups) but that the eating disordered participants had higher scale 2 elevations and lower scale 9 elevations compared to substance abusers (eating disordered persons less likely to act out). This connection of the high scale 2, low scale 9 may further support the relationship of bulimia and depression. The low scale 9 shows little or no energy to act out or do much in general which are signs often associated with depression.

Williamson et. al., (1985) studied MMPI profiles of individuals with bulimia in comparison to obese and normal subjects to determine levels of psychopathology for each group. Individuals with bulimia were found to have the highest levels of psychopathology, with scale 2 the only scale found to be clinically significant. Other scales bordered clinical significance which resulted in the authors suggesting that individuals with bulimia may be characterized as "more neurotic, depressed, impulsive, and manipulative than were normal and obese groups," and also, "characterized by more obsessive compulsive thinking, preoccupation, guilt, and alienation" (p. 165). Williamson, Prather, Upton, Davis, et al. (1987) compared two subgroups of individuals with bulimia, high and low frequency purgers, and found scale 2 elevations to be, "the single most common type of non eating disordered psychopathology associated with bulimia" (p. 46). Similar results were found

by Pryor and Wiederman (1985), whose study compared MMPI-2 profiles of women with anorexia nervosa to those with bulimia nervosa. In the overall group, which included both individuals with anorexia and bulimia, MMPI-2 scale 2 was also the only clinically elevated scale. Splitting the groups apart showed binge eating/purging individuals with bulimia with elevations on scales 4 and 6 with elevated scale 4 suggesting impulse problems and elevated scale 6 suggesting high levels of distrust, paranoia and affective instability (Pryor & Wiederman, 1985). The elevation of scales 4 and 6 for individuals with bulimia is not uncommon and is explained further by an example from other research.

The 4-5-6 Configuration

The elevation of scales 4 and 6 associated with a low scale 5 has been called (along with other names) the 4-5-6 Configuration (Pendleton, Tisdale, Moll and Marler, 1990). Greene (1980) previously described this configuration as the Scarlett O'Hara V, the criteria for this being a T score above sixty-five for scales 4 and 6 along with a T score below thirty-five for scale 5. Women with this profile were described as "hostile and angry but unable to express these feelings directly," and also, "excessively demanding, dependent, and have an almost inordinate need for affection" (p. 99). Pendleton et al. (1990) studied this phenomenon using individuals with bulimia versus control participants. The hypothesis for the Pendleton et al. study was that individuals with bulimia would show the 4-5-6 Configuration more often than the control group. Results were not supportive of that hypothesis; no difference was found between the groups pertaining to the 4-5-6 Configuration as the discrete variable. The authors offered an explanation for the non-difference by further examining scale five. They suggested the possibility that individuals with bulimia are not different from normals because they over identify with their feminine role but instead are at conflict between the dependent and aggressive roles. This configuration is not found to be supported by more/most recent studies.

Between and With-In Group Comparisons

Multiple studies (Prather & Williamson, 1988; Pryor & Wiederman, 1995; Rybicki, Lepkowsky and Arndt, 1989; Scott & Baroffio, 1986; Williamson et al., 1985) have shown that individuals with bulimia exhibit more psychopathology when compared to their non-bulimic counterparts. Scott and Baroffio (1986) explained the close relation of eating and emotions, how eating can be used as a way for some (i.e., individuals with bulimia) to handle psychological conflict and interpersonal problems. The various clinical scales of the MMPI and MMPI-2 are useful tools for discovering the underlying variables that may be present in the personality of an individual with bulimia, possibly leading that individual to use food in such a manner. For example, one may find high depression or anxiety to be the variables which trigger the binge/purge cycle common with individuals with bulimia. Finding ways to treat those variables and get them under control may be a way to prevent the binge/purge behaviors from continuing.

Dykens and Gerrard (1985) studied the psychological profiles of purging individuals with bulimia compared with repeat dieters and a control group, results showed that the individuals with bulimia scored higher on a number of clinical scales, the two most discriminating being scale 4 and scale 9. They described the often manic, impulsive and out of control behaviors of individuals with bulimia in relation to food to help explain the high scale 4 and scale 9 scores. Results also showed little significant difference between past and current individuals with bulimia but still showed both differing significantly from the control group. A possible explanation was provided in that the past individuals with bulimia may have had the binge/purge behavior under control but still showed the personality characteristics of the current individuals with bulimia. This finding shows the seriousness of bulimia nervosa and the life long effects this disorder can have has on its victims. Those personality characteristics may be so deep rooted that even after the outward physical symptoms (bingeing and purging) are under control the disturbed personality characteristics and disturbed thought patterns persist.

Shisslak, Pazda and Crago (1990) added an interesting twist in studying those with eating disorders by breaking down the classified "bulimic" group into categories of overweight, underweight and normal weight individuals with bulimia to examine MMPI profile differences between the three groups. Results showed the underweight group of individuals with bulimia had the highest amount of psychological disturbance, followed by the overweight and then normal weight group of individuals with bulimia. The underweight group showed significant clinical scale elevations for scales 3,4,5,7, and 8. The overweight group showed significant clinical scale elevations for scales 2 and 4 and the normal weight group, while showing no significant elevations, still showed scores higher than the control group for seven of the ten clinical scales. Shisslak et al. stressed the importance of categorizing the individuals with bulimia by weight due to the fact that important and significant results could be overlooked and possibly unidentified when the assumption is made that all individuals with bulimia are the same.

Conclusion

While the use of the MMPI-2 with those suffering from bulimia nervosa does not provide clear cut answers or completely consistent profiles of individuals with bulimia, the MMPI-2 may help in putting together general personality characteristics common to individuals with bulimia and in understanding basic commonalities between individuals with bulimia. Even though a clinical diagnosis can be made which labels a person (or persons) bulimic, the variables underlying each person's own struggle with bulimia nervosa will vary to some degree. Pryor and Wiederman (1996) provided a possible explanation for why MMPI-2 results are not always consistent across studies of those with bulimia nervosa. The belief was that MMPI-2 scores could be easily more highly elevated depending on the current physiological state of the test taker, i.e., if the person is in a starvation phase such as may be the case with an individual with bulimia. As stated earlier, the results obtained from the MMPI-2 must be interpreted in conjunction with information

obtained from a clinical interview and other testing procedures in order for most accurate and beneficial interpretations to be made by the examiner.

Although the studies discussed in this article all varied somewhat in their findings, many consistencies were found. Generally, the research showed the majority of those individuals with bulimia as all having some degree of psychopathology. For example, the most prevalent scale elevation for those individuals with bulimia was shown to be scale 2, another was scale 4. Using the MMPI-2 to not simply study a common profile of an individual with bulimia, but to compare that profile with those of other groups of people, is a way to discover an immense wealth of knowledge. Research using the MMPI and MMPI-2 has been very detailed; studies have compared test results of individuals with bulimia to other eating disordered groups, substance abusing groups, and even the different weight groups among individuals with bulimia nervosa. This leads to a greater awareness of the similarities and/or differences between those groups. Furthermore, it enables researchers to gain, and make use of, a better understanding of both the similarities and the differences between and within groups.

Results obtained from studying MMPI-2 profiles of individuals with bulimia may help to recognize at-risk persons and, as a result, make way for early intervention and prevention to take place. Utilizing the information obtained from the studies of MMPI-2 profiles of individuals with bulimia and realizing the high degree of psychological impairment, Williamson et al. (1985) suggested that the treatment of bulimia nervosa be aimed at both cognitive and affective components of the disorder. The bingeing and purging must be treated as well as the apparent psychopathology. Information obtained from MMPI-2 results can help clinicians know what areas need to be focused on and addressed in treatment of disorders such as bulimia nervosa. The seriousness of bulimia nervosa, the psychological turmoil associated with the disorder, and the number of other serious variables associated with the disorder make bulimia nervosa a disorder necessary for continued research.

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